

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) An air cleaning device with a photocatalyst, comprising:
a body ~~(1)~~;
a ~~first~~ filter unit ~~(4)~~;
a photocatalyst reaction unit which can generate a spiral air current;
a forcible convection unit ~~(3)~~; and
a circuit control unit ~~(5)~~ which can adjustably control the operation of the forcible convection unit ~~(3)~~, wherein:

the ~~first~~ filter unit ~~(4)~~ is disposed below the body ~~(1)~~ and has a front surface ~~in shape of~~ with an opening ~~so as to communicate~~ communicating with the outside and a rear surface in communication with the forcible convection unit ~~(3)~~, ~~and~~

the forcible convection unit ~~(3)~~ is disposed between the ~~first~~ filter unit ~~(4)~~ and the photocatalyst reaction unit ~~so as to communicate~~ so the first filter unit (4) communicates with the photocatalyst reaction unit, ~~characterized in that:~~

the photocatalyst reaction unit includes an air duct ~~(21)~~, a photocatalyst coating layer ~~(22)~~ disposed on an interior wall of the air duct ~~(21)~~, two lamp holders ~~(24)~~, at least one ultra violet ray tube ~~(23)~~ mounted on the two lamp holders ~~(24)~~, and a blow guide holder ~~(26)~~ on which a spiral blow guide blade ~~(25)~~ is mounted,

~~wherein two ends of the air duct (21) are hermetically connected to left and right side plates of the body (1), respectively,~~

the air duct ~~is provided~~ includes, at a left side thereof ~~with~~, an air inlet port ~~which is in communication with the air outlet port of the forcible convection unit (3), in a tangential direction thereof, at a right side thereof,~~ and with an air outlet port in a tangential direction thereof;

~~two ends of each ultra violet ray tube (23) are mounted on the lamp holders (24) and axially disposed inside the air duct (21), respectively;~~

the blow guide holder ~~(26) is provided~~ located on the left side plate and located at a position of the air inlet port of the air duct ~~(21)~~, and

one of the two lamp holders ~~(24)~~ is connected to the right side plate of the body ~~(4)~~, and the other ~~one~~ lamp holder is connected to the blow guide holder ~~(26)~~.

2. (Currently Amended) The air cleaning device with a photocatalyst according to claim 1, ~~characterized in that: wherein~~ the air duct ~~(21)~~ is composed of includes two elongated housings, each housing having a semi-circle section, which can be abutted with each other, wherein each of the two semi-circle shaped housings ~~is provided~~ includes, at a lower left side thereof with, a recess so that ~~two~~ the recesses of the two ~~housing~~ housings can be abutted with each other so as to form ~~an~~ the air inlet port.

3. (Currently Amended) The air cleaning device with a photocatalyst according to claim 1 ~~or 2, characterized in that: wherein~~

the interior wall of the air duct ~~(21)~~ is formed into an accidented includes a surface with undulations, and

the photocatalyst coating layer ~~(22)~~ is coated onto coats the ~~accidented~~ surface with undulations of the interior wall of the air duct ~~by a spraying or impregnating process.~~

4. (Currently Amended) The air cleaning device with a photocatalyst according to claim 1 ~~or 2, characterized in that: wherein~~

the ~~first~~ filter unit ~~(4)~~ includes a dust blocking web ~~(42)~~ and a movable door ~~(41)~~ which are provided on a front housing ~~(11)~~ of the body ~~(1)~~, wherein

the dust blocking web ~~(42)~~ is a filter web made of active carbon or high-efficiency HEPA filtering materials or a combination thereof, and

the movable door ~~(41)~~ is disposed on a front side of the dust blocking web ~~(42)~~ and provided with includes an air suction grill.

5. (Currently Amended) The air cleaning device with a photocatalyst according to claim 1 ~~or 2, characterized in that: wherein~~

the forcible convection unit ~~(3)~~ is configured to be includes a blower ~~consisting of~~ having

a motor ~~(31) which is provided~~ located between a front housing and a rear housing of the body ~~(1)~~ and connected to the circuit control unit ~~(5)~~, and a plurality of blades ~~(32) which are~~ mounted on a ~~rotation~~ rotating shaft of the motor ~~(31), wherein:~~ and

an air inlet port of the blower is in communication with the ~~first~~ filter unit ~~(4)~~ and an air outlet port ~~thereof~~ of the filter unit is in communication with an air inlet port of the photocatalyst reaction unit.